

Notice of Allowability

Application No.

10/065,881

Examiner

Jennifer Doan

Applicant(s)

KAPUSTA ET AL

Art Unit

2874

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to amendment filed on 9/23/05.
2. ☒ The allowed claim(s) is/are 1-19,21-27 and 31-34.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____

Jennifer Doan

EXAMINER'S STATEMENT OF REASONS FOR ALLOWANCE

Response to Amendment

1. Applicants' amendment filed on September 23, 2005 has been fully considered and entered.

Reasons for Allowance

2. Claims 1-19, 21-27 and 31-34 are allowed.

3. The following is an examiner's statement of reasons for allowance:

The prior art of record fails to disclose or reasonably suggest an optical coupling system for coupling optical energy between optical device, the system comprising the waveguide including first section receptive of the N-mode radiation from the optical beam redirection device and having a thickness of h and being asymmetric in shape; a tapered section having a first end thereof with a thickness of h joined with the first waveguide section and a second end thereof with a thickness of t joined with the second waveguide section for coupling the N-mode radiation from the first waveguide section to the second waveguide section in combination with the other limitations of claims 1, 31 and 33.

Claims 2-4, 6-12 and 15 depend from claim 1.

Claim 32 depends from claim 31.

Claim 34 depends from claim 33.

The prior art of record also fails to disclose or reasonably suggest an optical coupling system for coupling optical energy between optical device, the system comprising the waveguide including a tapered section having a first end thereof with a thickness of h joined with the first waveguide section and a second end thereof with a thickness of t joined with the second waveguide section for coupling the N-mode radiation from the first waveguide section to the second waveguide section; wherein the first end of the tapered section includes a first aperture and the second end of the tapered section includes a second aperture substantially parallel to the first aperture and wherein the first and second apertures are apart from one another so that the tapered section subtends a first angle, α , of about 5-10 degrees and second angle, β , perpendicular to the first angle, of about 5-10 degrees at the second waveguide section in combination with the other limitations of claim 5.

The prior art of record also fails to disclose or reasonably suggest an optical coupling system for coupling optical energy between optical device, the system comprising the waveguide including the segment of the second waveguide positioned within the first waveguide includes a wedge having a triangular cross section having a base with a length t joined with the second waveguide section and an angled apex opposed to the base; wherein the wedge is receptive of the N-mode radiation from the optical beam redirection device for coupling the N-mode radiation from the optical beam redirection device to the second waveguide section in combination with the other limitations of claims 13 and 18.

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Claims 14 and 16-17 depend from claim 13.

Claims 19 and 21-25 depend from claim 18.

The prior art of record also fails to disclose or reasonably suggest an optical coupling system for coupling optical energy between optical device, the system comprising the waveguide including a third section positioned within the tapered section, the third section having a refractive index and receptive of the N-mode radiation from the tapered section in combination with the other limitations of claim 26.

Claim 27 depends from claim 26.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jennifer Doan whose telephone number is (571) 272-2346. The examiner can normally be reached on Monday to Thursday from 6:00am to 3:30pm, second Friday off.

5. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Rodney Bovernick can be reached on (571) 272-2344. The fax phone

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number for the organization where this application or proceeding is assigned is 703-872-9306.

6. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jennifer Doan

Patent examiner

December 1, 2005